Remarks

In the Office Action, the Examiner noted that claims 1-3, 5-11 and 17-38 are pending in the application; claims 6, 7, 10, 11 and 19-21 are allowed; and that claims 1-3, 5, 8, 9, 17, 18 and 22-38 are rejected; and this Office Action has been made final. By this amendment, claims 26-38 have been amended in order to place them in better form for an allowance. Specifically, claims 26-38 have been amended to recite the specific diseases that can be treated by the compounds of this invention. More specifically, claims 26-33 recites the disorders that are associated with glyt1 transporter. Support for this amendment can be found at specification, page 45, lines 9-21. Similarly, claims 34-38 recite a number of disorders which are associated with the glyt2 transporter, support for this can be found in the specification at page 46, lines 3-19. Thus, claims 1-3, 5-11 and 17-38 are pending in the application. No new subject matter has been inserted through these amendments.

The undersigned acknowledges with much appreciation the courtesies extended by Examiner Balls during an informal telephonic inquiry initiated by the undersigned on October 23, 2006. At which time the undersigned discussed with the Examiner the status of the pending claims. It was noted that Examiner Balls was newly assigned to this case as the original Examiner Perlinger is no longer working at the USPTO. Whereas no absolute agreement was reached, the reasons for the amendments to claims 26-38 incorporating specific diseases were discussed and Examiner Balls was encouraging as to the resultant allowance of the case pending review. Also discussed were the rejections of claims 17, 18 and 22-25 under 35 USC 112, 1st and/or 2nd paragraphs based on new matter for which the undersigned noted that proper support in the specification will be provided in this response traversing these rejections. The Examiner's rejections are respectfully traversed below.

Oath/Declaration

Applicants note with much appreciation the withdrawal of objection as to oath as the oath filed on May 17, 2006 is deemed to be in compliance with 37 CFR 1.67(a).

Specification

Applicants note with much appreciation the Examiner's remarks that the instructions Applicants provided in their response of May 17, 2006 with regard to the objections to the specification and abstract will be followed at the time of issuance, thus obviating this objection.

Withdrawal of Rejection Under 35 U.S.C. § 112, Second Paragraph

Applicants note with much appreciation the withdrawal of rejection as to claims 1-3, 5, 8-9 and 12-14 under 35 USC 112, second paragraph in view of the amendments to said claims, filed May 17, 2006.

Withdrawal of Rejection Under 35 U.S.C. § 103(a)

Applicants note with much appreciation the withdrawal of rejection as to claims 1-3 and 5-11 under 35 USC 103(a) in view of the Applicants' response, filed May 17, 2006.

Double Patenting Rejection

Claims 1-3, 5, 8-9 and 12-14 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7 of copending Application No. 11/045,247.

Applicants submit herewith a terminal disclaimer obviating this rejection. In addition, a statement accompanying the terminal disclaimer is also enclosed herewith, which states that the assignee of record, Sanofi-Aventis, is the sole owner with 100 percent interest in the instant application as well as copending Application No. 11/045,247. Thus, withdrawal of rejection as to claims 1-7 is respectfully requested.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 26-38 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the Examiner has noted that the instant claims are indefinite where a method for the disorder "associated with" glyt1 or glyt2 is claimed as the scope of the disorders to be treated cannot be ascertained. However, it is respectfully submitted that claims 26-38, as amended, obviates this rejection because the amended claims 26-38 do not recite a disorder associated with either glyt1 or glyt2 transporter. Instead, claims 26-33 are amended to recite the specific disorders which are associated with glyt1 transporter that can be treated, and support for which can be found in the specification at page 45, lines 9-21. Similarly, claims 34-38 as amended recite various other disorders that are associated with glyt2 transporter that can be treated, support for which can be found at page 46, lines 3-19. In view of the foregoing it is respectfully submitted that claims 26-38 as amended are in full compliance with 35 USC 112, 2nd paragraph. Accordingly, withdrawal of rejection as to claims 26-38 is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claim 17 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

In particular, the Examiner alleges that the "claim contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention." More specifically, the Examiner alleges that the "instant claim is drawn to a compound according to claim 1 wherein A represents a group of general formula N-R1 in which R1 represents either a hydrogen atom, or a linear or branched (C1-C7) alkyl group optionally substituted with one or more fluorine atoms and said compound is in the form of a free base or of an addition salt with acid." The

Examiner now contends that "upon review of the specification, description of the instant claimed compound could not be found," and therefore, the Examiner concludes that the amendment of the claim 17 represents new matter and claim 17 is rejected accordingly.

However, Applicants respectfully submit that the Examiner has erred in arriving at the above conclusion. Contrary to the views of the Examiner, it is respectfully submitted that claim 17 does not contain any new matter. In fact, claim 17 simply recites a narrower limitation of claim 1 upon which it depends and all of the limitations of claim 17 can readily be found in claim 1 itself. That is, as noted above, claim 17 recites as follows:

> "17. A compound according to claim 1 wherein A represents a group of general formula N-R_1 in which R_1 represents either a hydrogen atom, or a linear or branched (C_1-C_7)alkyl group optionally substituted with one or more fluorine atoms and said compound in the form of a free base or of an addition salt with an acid."

Please note that claim 17, which depends directly upon claim 1 incorporating all of the limitations of claim 1, recites further only one of the limitations of substituent A, all of which is fully supported in claim 1 itself, thus constituting no new matter. Nevertheless, further support for claim 17 can be found in the specification at various places, for instance at page 1, lines 9-13, where exact language of a portion of claim 17 can be found, and at page 2, lines 17-19 provides further support for remaining part of claim 17. More support for claim 17 can be found at page 3, lines 13 to page 4, line 5, etc. Thus it is respectfully submitted that the claimed subject matter of claim 17 is not new mater. Thus it is submitted that claim 17 fully satisfies the requirement of 35 USC 112, 1st paragraph. Accordingly, withdrawal of rejection as to claim 17 is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claim 18 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Again, the Examiner is rejecting claim 18 incorrectly as containing new matter which was not described in the specification. More specifically, dependent claim 18, which depends directly upon claim 1, recites about 14 specific compounds, all of which fall within the scope of claim 1. Although the Examiner acknowledges that there is support for all of the salts recited therein, the Examiner however does not acknowledge support for the five free bases listed therein and thus alleges that these five compounds constitute new matter. As we argued above, all of the compounds falling within the scope of claim 1, including the free bases as well as their salts, are considered to be within the scope of this invention and thus should not be construed as new matter. Nevertheless, support for the isolation of free bases can be found in the specification at various places. For instance, Scheme 1 illustrates the preparation of compounds of formula I wherein R1 is other than hydrogen, see page 3, line 13 to page 4, line 5. Similarly, Scheme 4 illustrates the preparation of compounds of formula I wherein R1 is hydrogen, see page 7, line 13 to page 8, line 10. More specifically, one of the specific free base compounds, "threo-2-chloro-*N*-[(1-ethylpiperidin-2-yl)phenylmethyl]-3-trifluoromethylbenzamide," which the Examiner alleged it to be not described in the specification and thus considered to be new matter is in fact described in the specification as an oily product, see page 16, line 5. This oily product was then treated with 0.1 N hydrochloric acid in isopropanol solvent to form the hydrochloride salt, i.e., threo-2-chloro-*N*-[(1-ethylpiperidin-2-yl)phenylmethyl]-3-trifluoromethylbenzamide hydrochloride, see Example 1 at page 15, compound 33 and the final isolation step at page 16, lines 6-13. Please note that although the specification does not state that the oily product is the free base, one of ordinary skill in the art would readily appreciate that it is in fact a free base by the disclosures in the specification as noted above.

As to the second compound, 2-chloro-*N*-[(1*S*)-[(2*S*)-1-methylpiperidin-2-yl]phenylmethyl]-3-trifluoromethyl-benzamide, which the Examiner alleges not supported by the specification, Applicants note that it is in fact supported by the specification at page 20, line 11, where it is noted that "0.45 g of product is obtained in

base form." Thus it is submitted that this compound is fully supported by the specification.

Similarly, the Examiner alleges that a compound, "threo-4-amino-3-chloro-*N*-[(1-methylpiperidin-2-yl)phenylmethyl]-5-trifluoromethyl-benzamide," is not supported by the specification, however, support for it can be found in the specification at page 23, line 26, where it is clearly stated that "0.4 g of compound is isolated in base form." The free base was then converted to the hydrochloride salt, see page 24, lines 1-7.

The Examiner further alleges that a compound, "4-amino-3-chloro-*N*-[(1*R*)-[(2*R*)-1-methylpiperidin-2-yl]phenylmethyl]-5-trifluoro-methylbenzamide," is not supported by the specification. However, support for this compound can be found in the specification at page 25, line 13, where it is stated that "1.12 g of product are obtained in base form."

Finally, the Examiner alleges that a compound, "threo-2-chloro-*N*-[phenyl(piperidin-2-yl)methyl]-3-trifluoromethylbenzamide," is not found in the specification. However, it is submitted that this compound is in fact found in the specification at page 27, line 27 to page 28, line 4. Where it is clearly noted as follows:

> "*0.8 g of the (less polar) threo diastereoisomer is isolated.* The hydrochloride thereof is prepared by dissolving it in a few ml of propan-2-ol and adding thereto 20 ml of a 0.1 N hydrochloric acid solution in propan-2-ol." (emphasis added) Again, see page 27, lines 21-25 of the specification.

From the foregoing it is clear that the free base was first isolated and then the hydrochloride salt was later formed as in the other four compounds described above. Thus it is submitted that all of the five free bases recited in claim 18, which the Examiner alleged that are not found in the specification are indeed clearly found in the specification as well as there is ample additional support for the claimed five free bases elsewhere in the specification, as discussed above. In view of all of the foregoing discussions it is

respectfully submitted that claim 18 fully satisfies the requirement of 35 USC 112, 1st paragraph. Accordingly, withdrawal of rejection as to claim 18 is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 22-25 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Again, the Examiner incorrectly alleges that "[U]pon review of the specification, written description of a pharmaceutical composition comprising a compound according to claim 18, 19, 20 or 21 combined with an excipient could not be found. The amendment of the claims 22-25 represents NEW MATTER rejection."

It is respectfully submitted this rejection is considered moot in view of the arguments presented above. That is, as we argued in detail above in traversing the rejection of claim 18, we clearly pointed out support for the free base both generically and specifically at various places of the specification. As we pointed out above, five of the free base compounds as claimed in claim 18 are fully supported by the specification. Claim 19 recites only one of the free bases of claim 18 and therefore it is also fully supported by the specification as we argued above. Thus it is submitted that claims 22 and 23 which depend respectively upon claims 18 and 19 are in compliance with the provisions of 35 USC 112, 1st paragraph.

However, it is not clear why the Examiner has rejected claims 24 and 25. Specifically claims 24 and 25 depend respectively on claims 20 and 21 both of which recite hydrochloride salts and the Examiner has already acknowledged the support for these two compounds and in fact has noted that claims 20 and 21 are allowed (as well as claim 19). That is, claim 20 recites a compound "2-chloro-*N*-[(1*S*)-[(2*S*)-1-methylpiperidin-2-yl]phenylmethyl]-3-trifluoromethylbenzamide hydrochloride 1:1," which as acknowledged by the Examiner is found in the specification at page 16, compound 18 (Example 2). Similarly, support for the compound of claim 21, "4-amino-

3-chloro-*N*-[(1*R*)-[(2*R*)-1-methylpiperidin-2-yl]phenylmethyl]-5-trifluoromethylbenzamide hydrochloride 1:1" can be found in the specification at page 24, compound 25 (Example 4). Thus it is submitted that this rejection as to claims 24 and 25 is improper.

In addition, Applicants draw the attention of the Examiner to disclosures in the specification beginning at page 46, line 20 to page 47, line 8 where it is clearly disclosed various pharmaceutical compositions that can be formed as part of the instant invention. In view of the foregoing it is respectfully submitted that claims 22-25 fully satisfy the requirements of 35 USC 112, 1st paragraph. Accordingly, withdrawal of rejection as to claims 22-25 is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 30-34, 36-38 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

In particular, the Examiner alleges that "[T]he instant claims are drawn to a method of treatment of a disorder associated with a glyt1 or glyt2 glycine transporter comprising administering to a patient in need of said treatment an effective amount of a compound according to claim 17, 18, 19, 20 and 21. Upon review of the specification, written description of the aforementioned methods could not be found. The amendment of the claims 30-34, 36-38 represents NEW MATTER. This is a New Matter rejection."

Again, Applicants respectfully traverse this rejection especially in view of the extensive arguments and support provided already above in overcoming rejections of claims 17, 18 and claims 22-25. More importantly, it should again be pointed out there was no new matter rejection for claims 20 and 21 (which in fact have been allowed), thus it is submitted that rejection of any claims dependent therefrom is in error. That is, rejection of claims 33, 34 and 38 is improper and/or unclear. Specifically, claims 33 and

34 depend respectively upon claims 20 and 1, and claim 38 depends upon claim 21, thus claims 33-34 and 38 should never have been rejected under this section.

As to claims 30-32 which depend upon claims 17-19, it is respectfully submitted that for the reasons advanced above the subject matter of claims 17-19 are fully supported by the specification, and therefore, claims 30-32 are also fully supported by the specification. Additional support for claims 30-32 can be found in the specification at page 39, line 3 to page 45, line 21. Similarly, claims 36 and 37 depend respectively upon claims 17 and 18, and therefore, are also fully supported by the specification for the reasons advanced above. In addition, further support for claims 36 and 37 can be found in the specification at page 45, line 22 to page 46, line 19. In view of the foregoing it is respectfully submitted that claims 30-34 and 36-38 are in compliance with the provisions of 35 USC 112, 1st paragraph. Accordingly, withdrawal of rejection as to claims 30-34 and 36-38 is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 26-38 stand rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

As already noted above, claims 26-38, as amended, obviates this rejection and therefore withdrawal of this rejection is respectfully requested. That is, claims 26-33 have been amended to recite only the diseases that can be treated which are associated with glyt1 glycine transporter. As noted, support for this amendment can be found in the specification at page 45, lines 9-21. Similarly, claims 34-38 have been amended to recite specific disorders that are listed in the specification at page 46, lines 3-19. In view of the foregoing it is submitted that claims 26-38, as amended, fully satisfy the requirements of 35 USC 112, 1st paragraph. Accordingly, withdrawal of rejection as to claims 26-38 is respectfully requested.

Allowable Subject Matter

Applicants note with much appreciation allowance of claims 6-7, 10-11 and 19-21. However, for all of the reasons advanced above the remaining claims 1-3, 5, 8, 9, 17,

18 and 22-38 are also in condition for allowance. Thus, an early allowance of this case is earnestly requested.

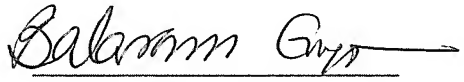
Conclusions

In view of the above Remarks, it is respectfully submitted that claims 1-3, 5-11 and 17-38 are now in condition for allowance and the early issuance of this case is respectfully requested. In the event the Examiner wishes to contact the undersigned regarding any matter, please call (collect if necessary) the telephone number listed below.

As noted above, Applicants concurrently submit herewith a terminal disclaimer. Applicants request the Commissioner to charge these fees and any other fees that are deemed necessary due to this submission to Deposit Account No. **18-1982** for sanofi-aventis U.S. LLC, Bridgewater, NJ. Please credit any overpayment to Deposit Account No. **18-1982**.

Respectfully submitted,

October 25, 2006



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Enclosure: Terminal Disclaimer (2 page)
Statement Accompanying Terminal Disclaimer (1 page)

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